

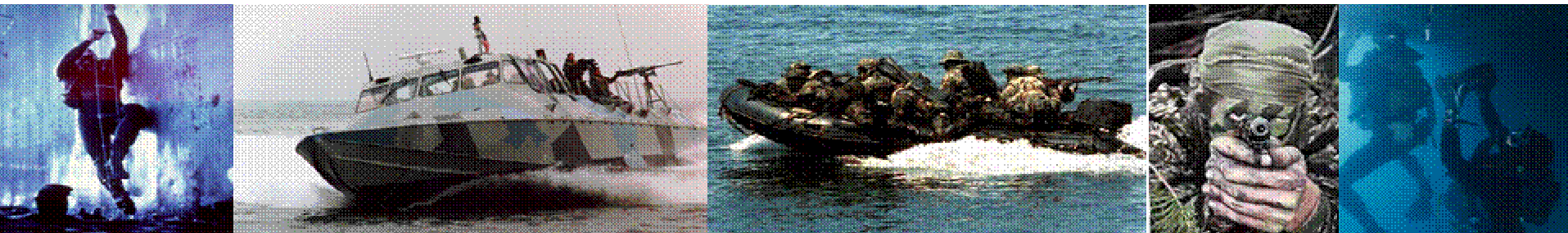
# **US Naval Special Warfare: Implementing Network-Centric Concepts**



**LT Jim Ford  
ONR Network Centric Warfare Conference  
August 2003**

# Overview

- Naval Special Warfare in the 21<sup>st</sup> Century
- Changing NSW's Focus
- NSW as a Network Centric Enterprise
- The NSW Mission Support Center
- Operational Benefits of Using Network Centric Principles
- Conclusions



# NSW Challenges in the 21<sup>st</sup> Century

The landscape of warfare has changed.

- September 11th has redefined the battlefield; today we face an asymmetric, unconventional foe
- The challenges facing us today are as formidable as those at the beginning of the Cold War



Naval Special Warfare is uniquely suited to these challenges.

- Demonstrated interoperability with coalition partners
- Access to littoral nations
- Implementing of network centric warfare principles
- Leveraging technology to improve rapid, decisive military actions
- Global presence at all times

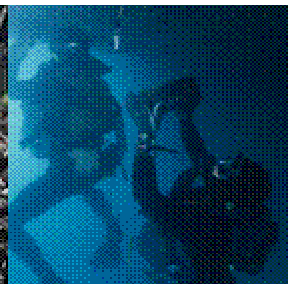
# Changing NSW Focus

## OLD

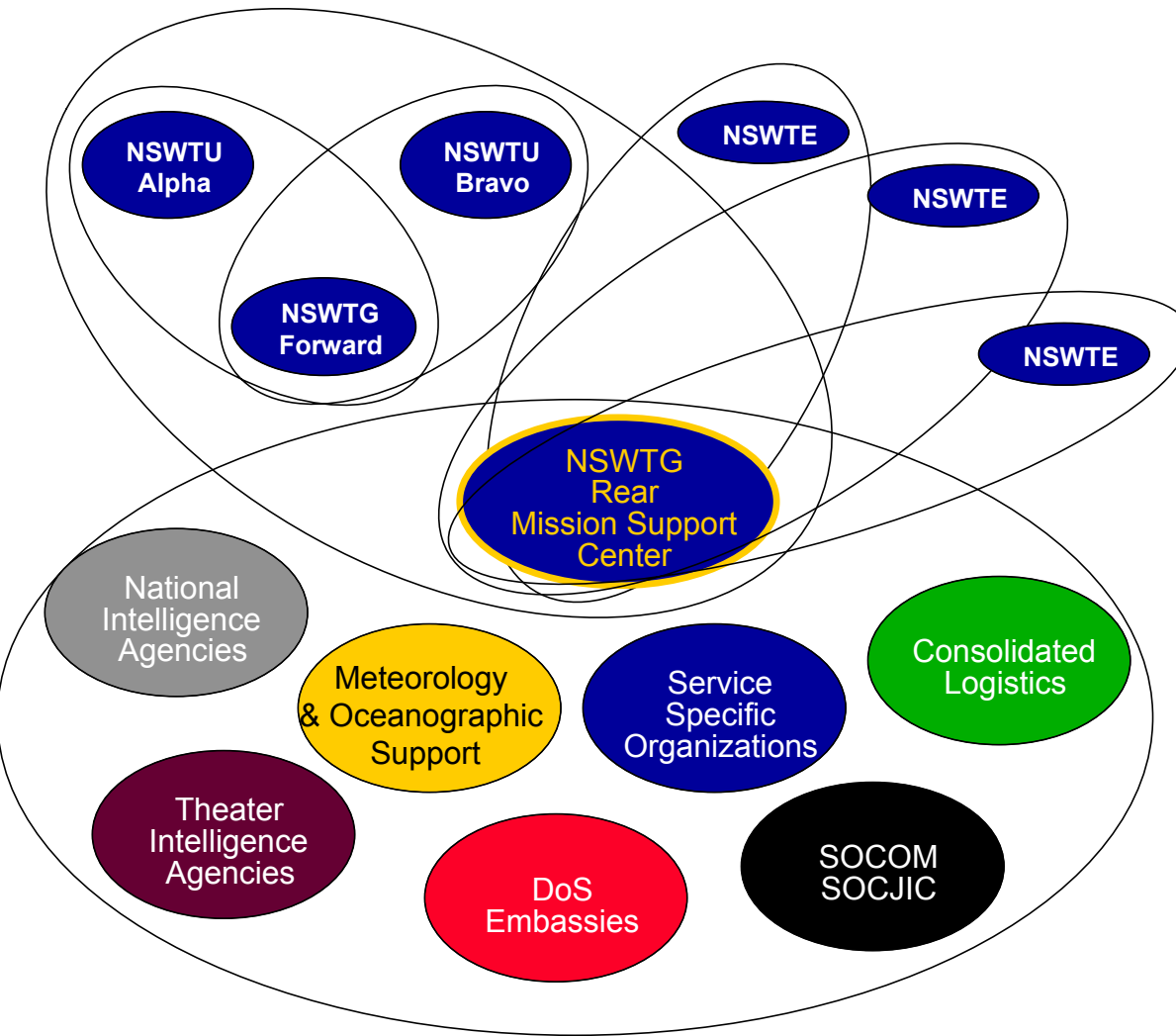
- SOF Mission →
- Force Multiplier →
- Target Centric →
- Direct Action →
- Fire Power →
- Intel Up-Front →
- Minimal C2 →

## NEW

- SOF Campaign
- Focus of Effort
- Network Centric
- Indirect Action
- Stealth
- Intel Continuous
- Robust C2

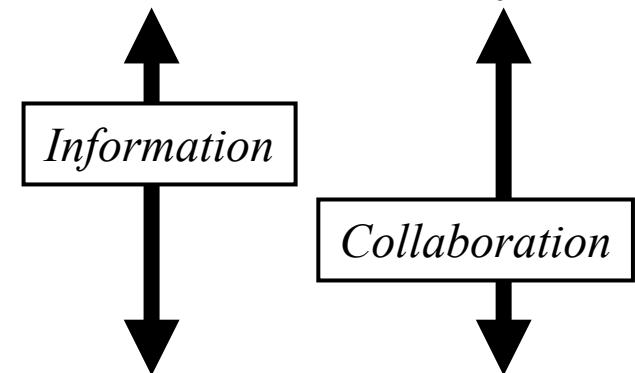


# NSW: A Network Centric Organization



## Deployed NSW Forces

- In-theater
- Short-term tactical ops
- Limited geographical focus
- Difficult field conditions
- Unreliable/insufficient systems



## Mission Support Center

- In-CONUS
- 24x7x365 world-wide focus
- Robust, reliable infrastructure
- Established relationships
- Corporate Knowledge

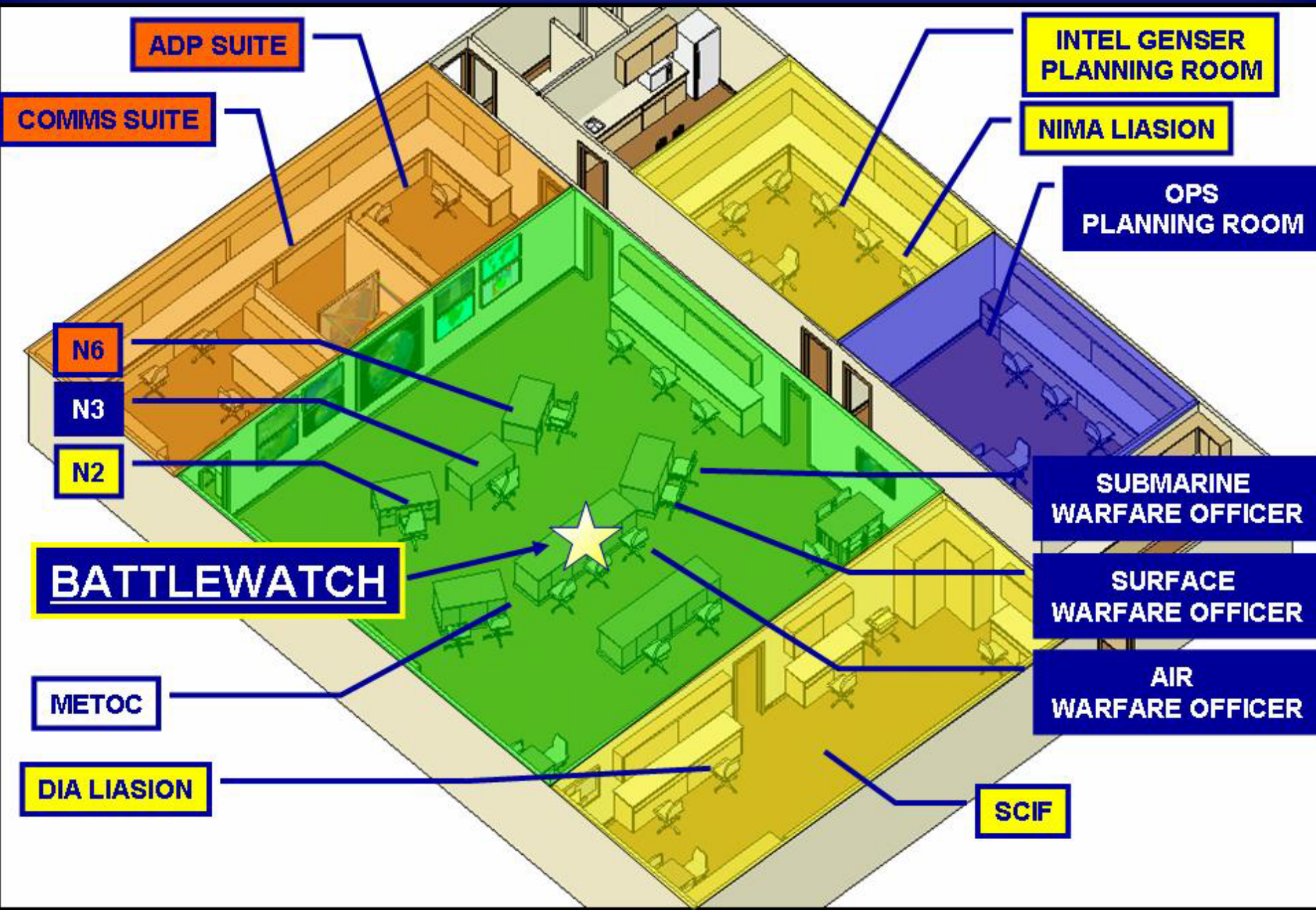


# The NSW Mission Support Center





# MSC Facility: Concentrated NSW Support



# Mission Support Center Benefits

- Reduced footprint in theater
- Reduced force protection concerns
- Easier to relocate forward HQ
- Dedicated NSW support amid the information fog of war
- NSW can maintain global focus

*More rehearsal time for the operator;*  
*less risk, greater chance of success*

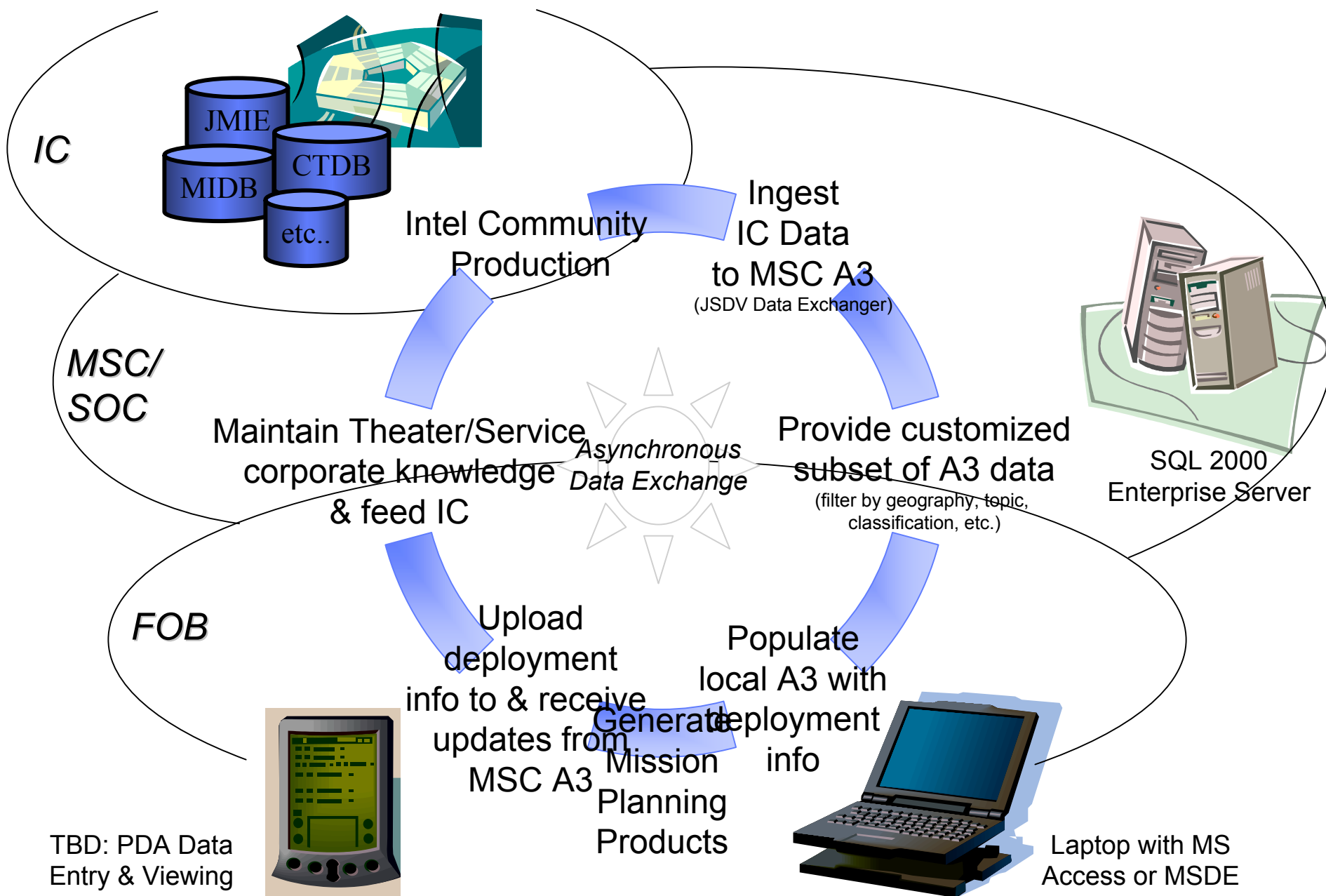




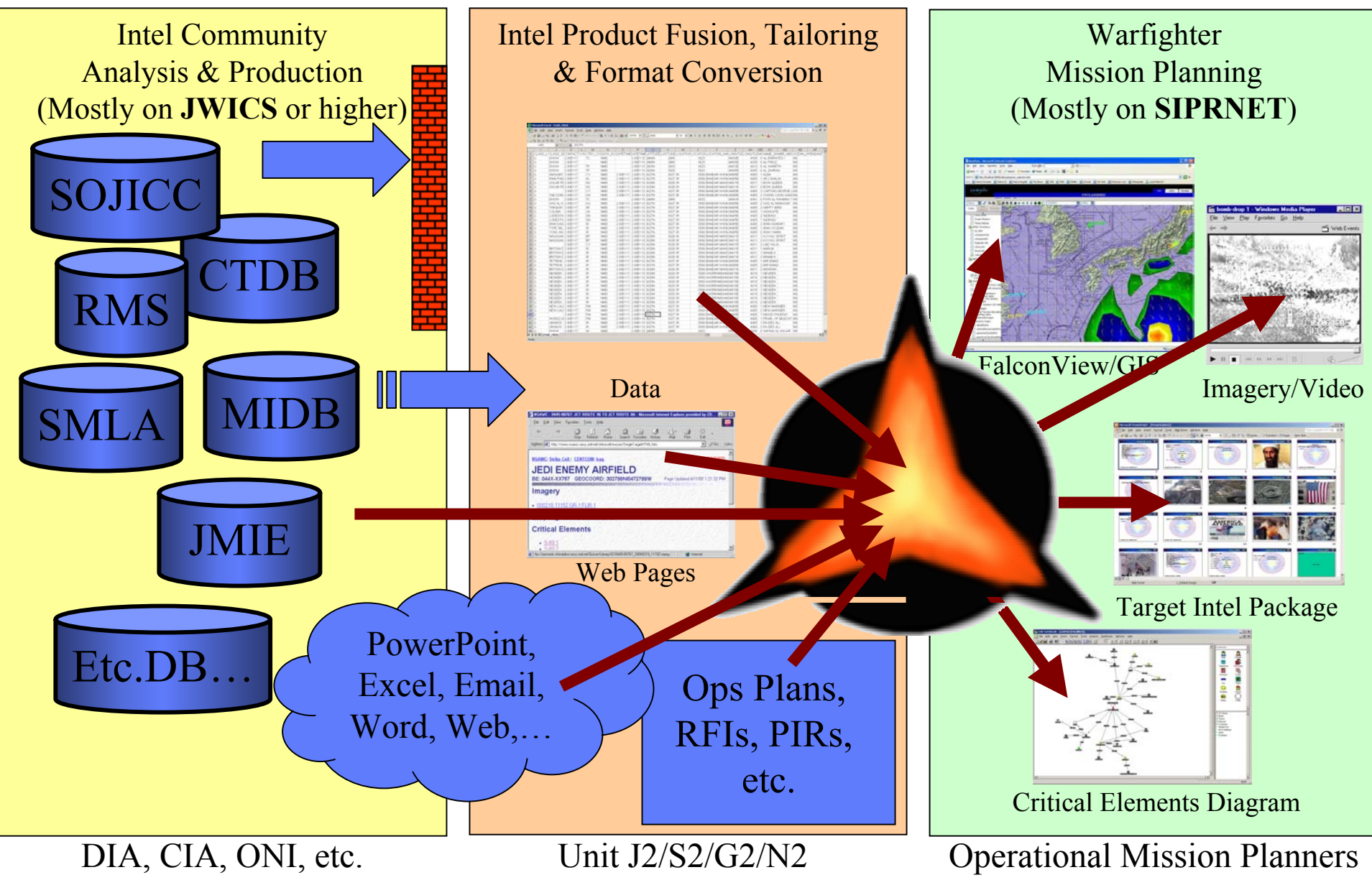
# Operational Examples of Distributed Support

- Federated Coordinated Operations
  - Support to two theaters and five operations simultaneously
    - Iraq, Afghanistan, Philippines, Horn of Africa, GWOT
- Distributed intelligence production
  - Fusion and synergy across all operational strata
    - National, Theater and tactical intelligence shared throughout the network centric enterprise
- Innovative application of information technology
  - Webbe – Instant Messaging
  - GBS: robust data movement
- Tailored Meteorology and Oceanography
- Nodal Knowledge Management
  - A3
  - Web Information Center (WIC)
- Rapid application design and implementation
  - JEDI – Software Engineers at the Operational Level

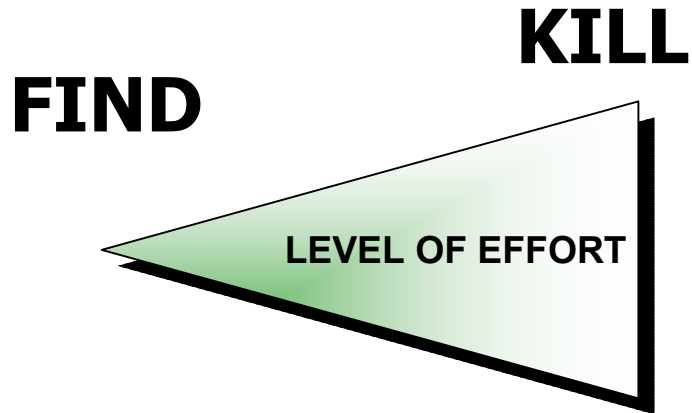
# Federated Distribution of Intelligence Production



# A3: Information Fusion for the Last Mile

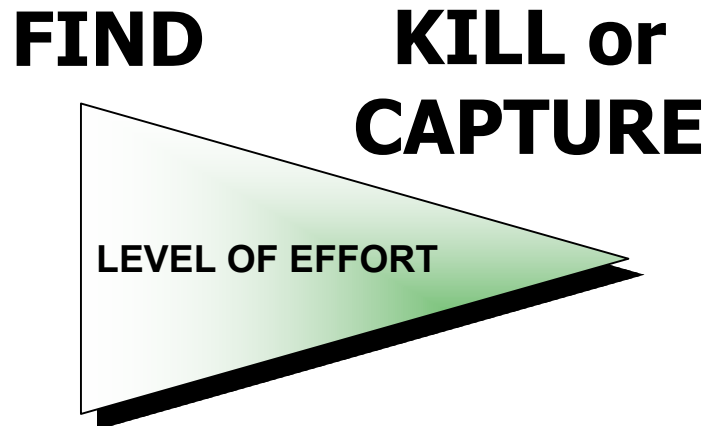


# Shifting Our Focus for the Challenges Ahead



## Traditional Warfare

- Minimal level of effort to find enemy
- Large, sustained effort to defeat



## War on Terrorism

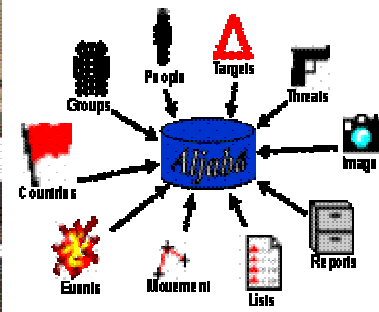
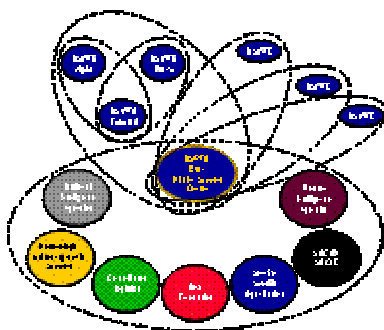
- Large level of effort to find enemy
- Minimal level of effort to defeat

***Network-Centric  
Operations are the Key!***



# Conclusion

- NSW's Network Centric Infostructure is poised to meet the challenges of 21<sup>st</sup> Century
- Building on operational successes in Afghanistan and Iraq
- Mastering the entire range of information phenomena: what it means & how it works



# Questions?



# **Backup Slides**



# Naval Special Warfare



MK V



HSV-X1



SOC-R



RIB



SEAL Plt



HMMWV



DPV



NSV



SAHRV



UAV

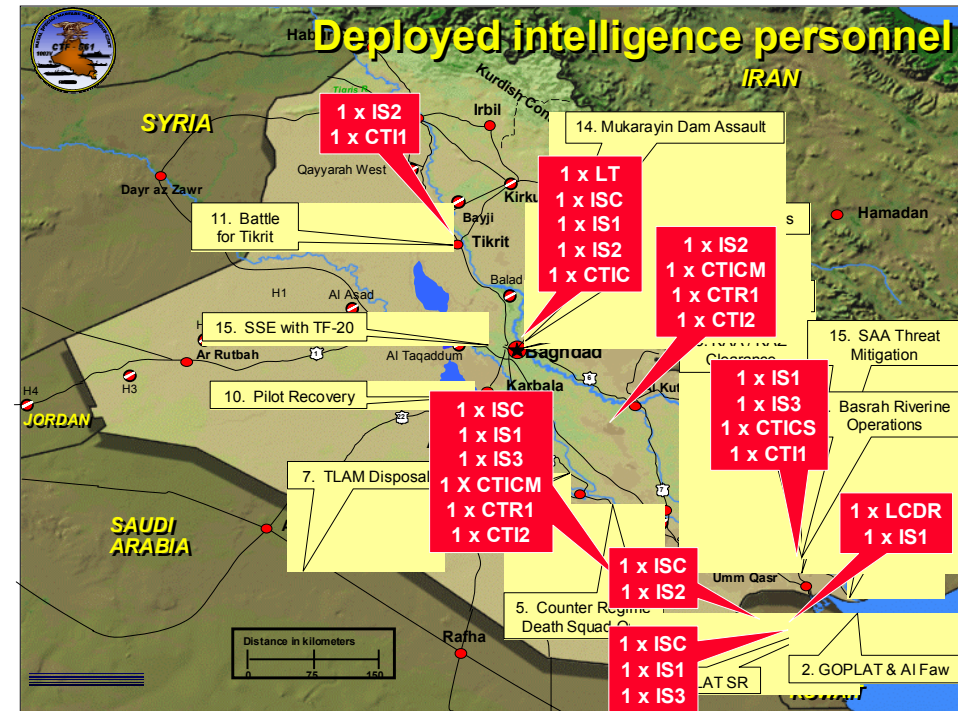


SDV



# NSW OIF: Manning

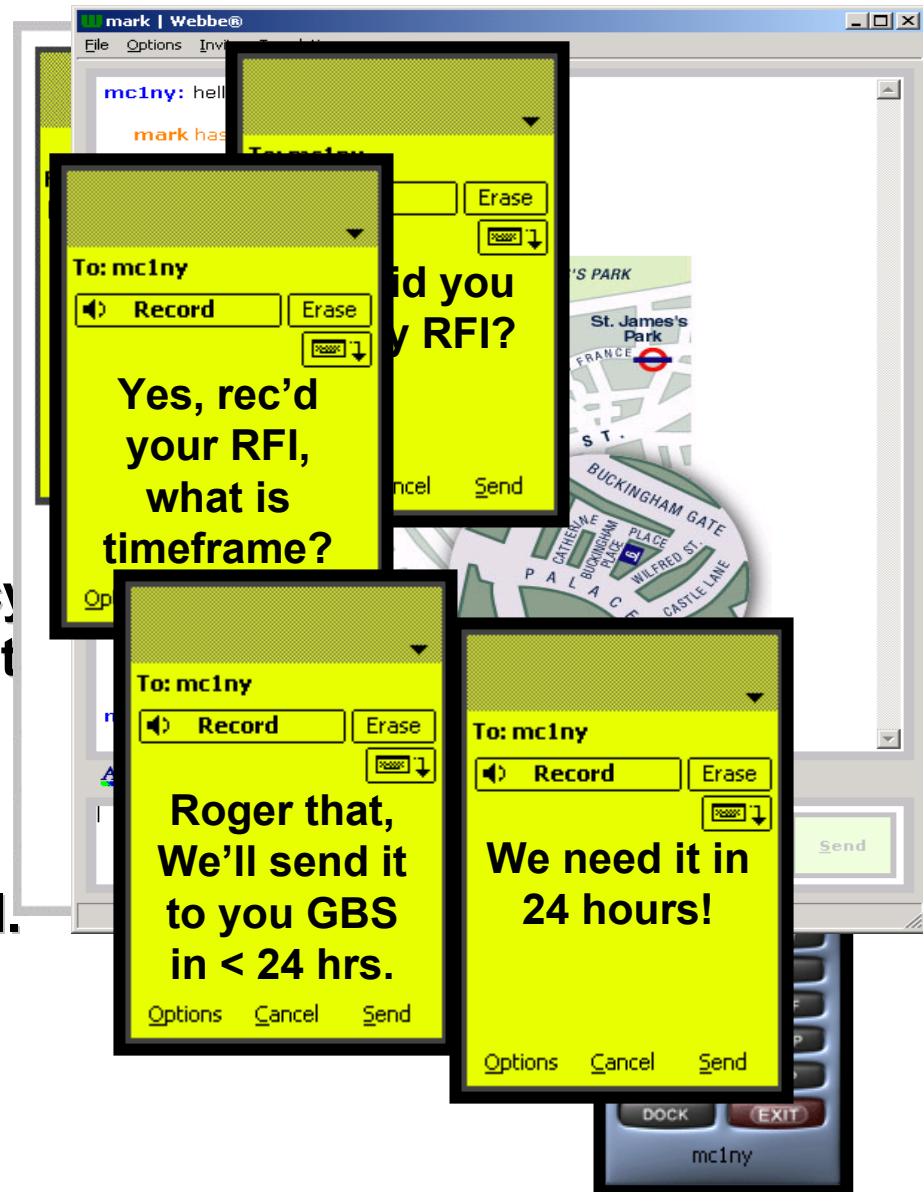
- Largest deployment of NSW intelligence personnel ever
  - Forward: 6 x Officer, 24 x Enlisted
- Every NSW Intel personnel a potential “standalone-JIC”
  - Maturity/Experience of the NSW force is paramount



# WEBBE® Instant Messaging

- ✓ Enables users to determine the online availability of another user instantly.
- ✓ Allows a user to exchange text, voice\*, URLs, images and data files instantly with other users.
- ✓ WEBBE® combines the immediacy of the telephone with the functionality of email – offline msg support.
- ✓ Integrates with IRC Chat, DCTS, NetMeeting, MSN and Outlook Email.
- ✓ CTs depended on IRC to provide I&W to forward OIF units.

(\*GSM 6.10 Compression algorithm)





# GBS Facilitated Raw Imagery Exploit



\* Raw image was 3 Gigabytes, sent 130 Meg cropped image via GBS

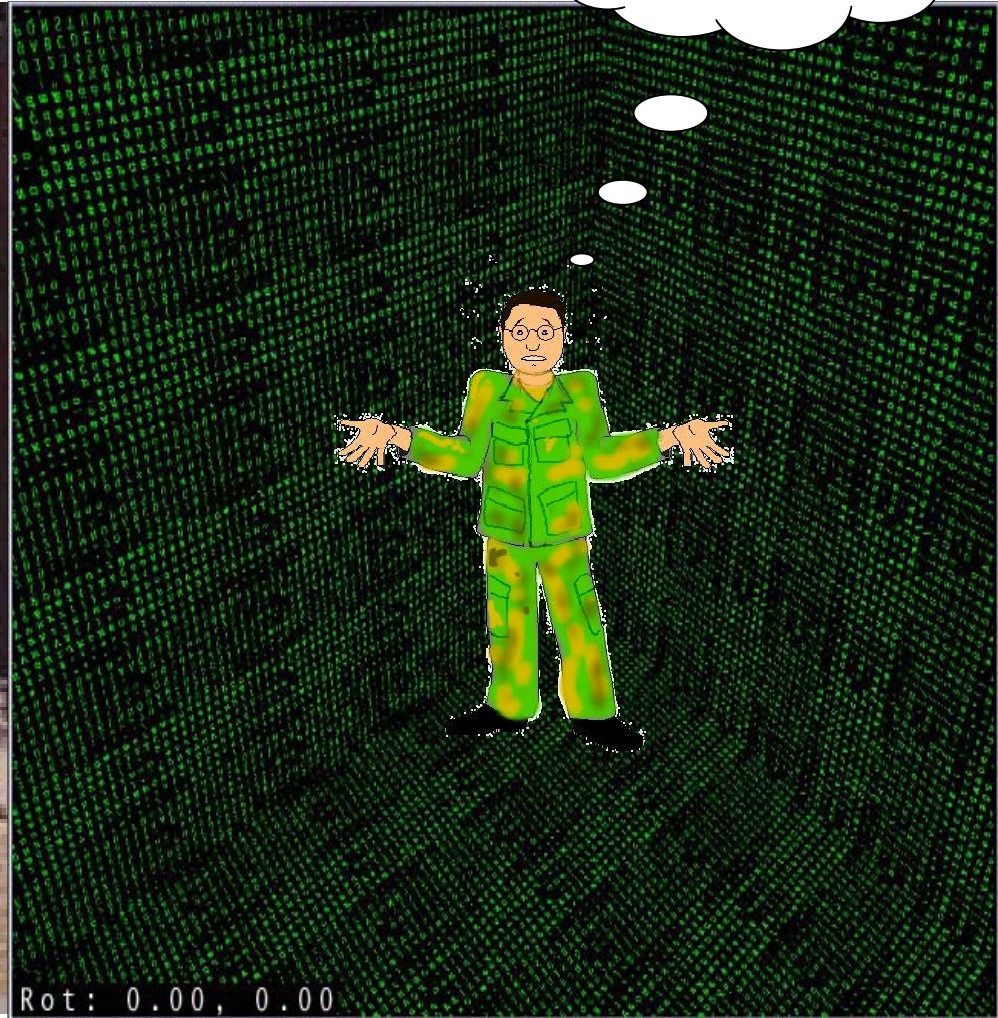


Mongo kill  
bad guy!



Ops

Candygram  
for Mongo?

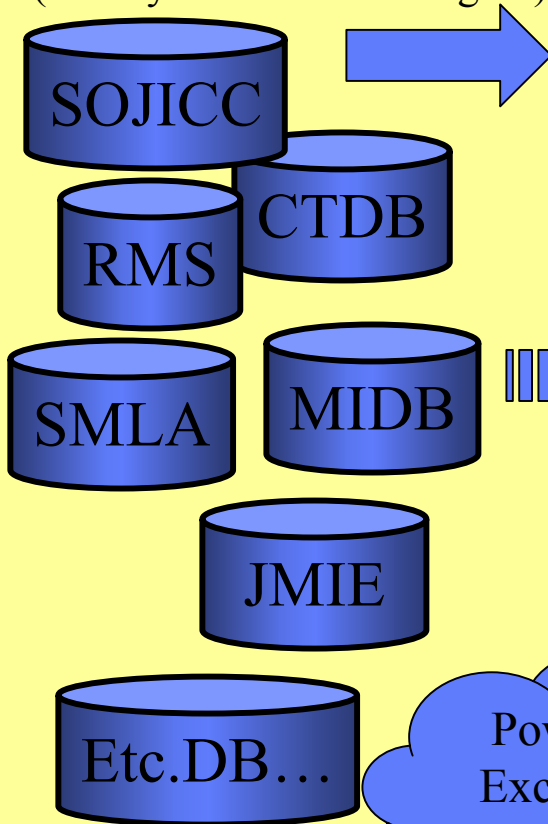


Intel



# Intel Support to Ops Work Flow

Intel Community  
Analysis & Production  
(Mostly on **JWICS** or higher)



DIA, CIA, ONI, etc.

Intel Product Fusion, Tailoring  
& Format Conversion

Table showing data columns and rows, likely representing intelligence data or mission parameters.

Data



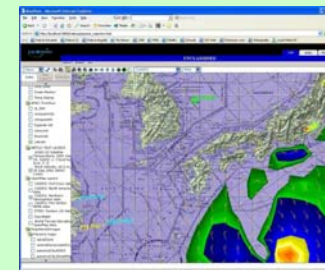
Web Pages

PowerPoint,  
Excel, Email,  
Word, Web,...

Ops Plans,  
RFIs, PIRs,  
etc.

Unit J2/S2/G2/N2

Warfighter  
Mission Planning  
(Mostly on **SIPRNET**)

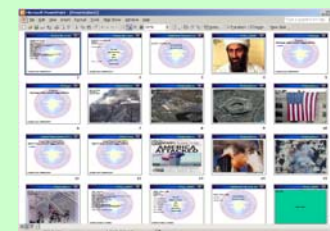


FalconView/GIS



Imagery/Video

**Information  
Overload  
&  
Manual  
Reformatting!!**



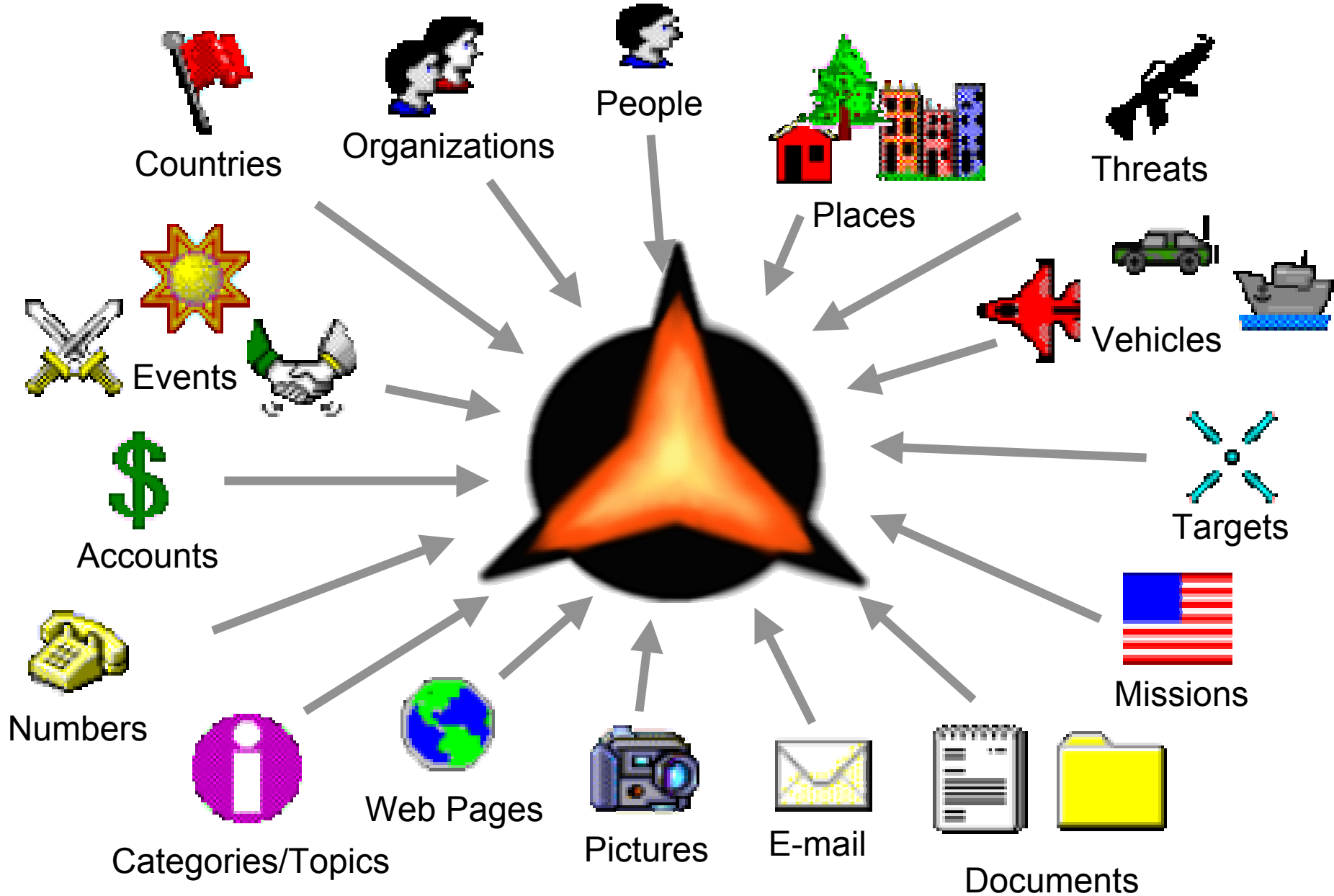
Target Intel Package



Critical Elements Diagram

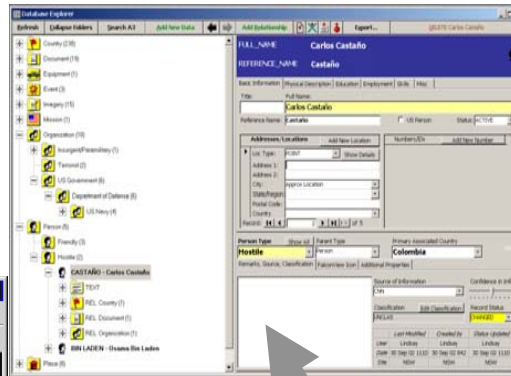
Operational Mission Planners

# *What do you need to know about?*

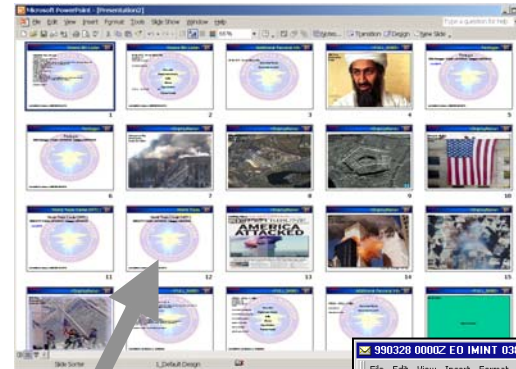


# How do you want to see it?

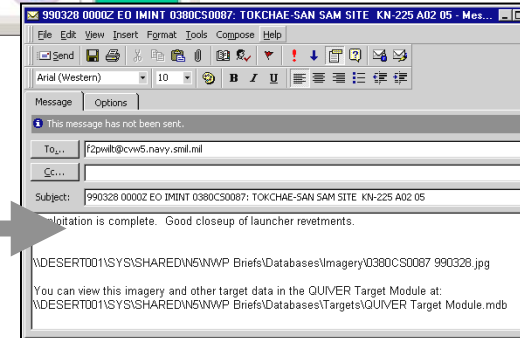
## Intuitive Interface



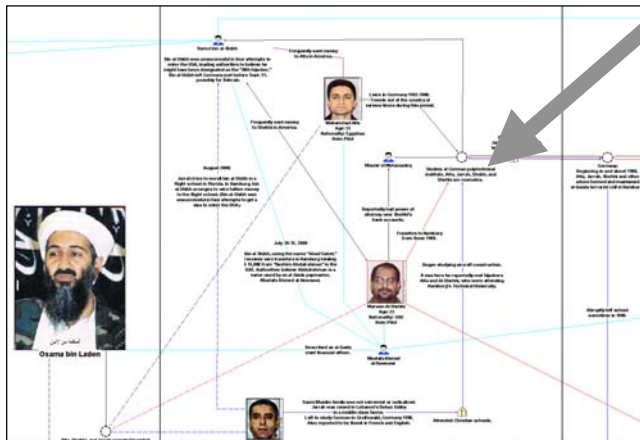
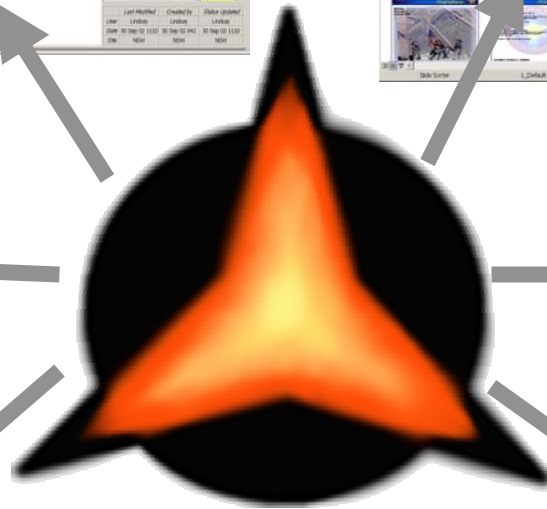
## PowerPoint



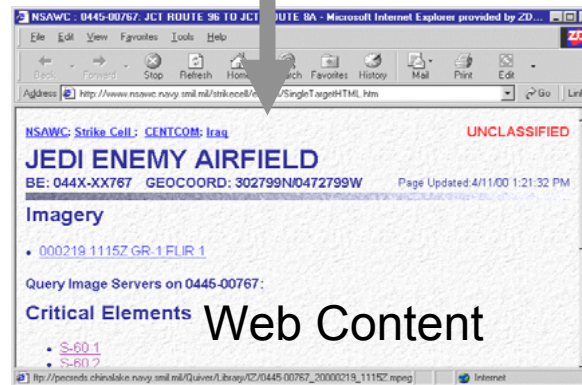
## Email



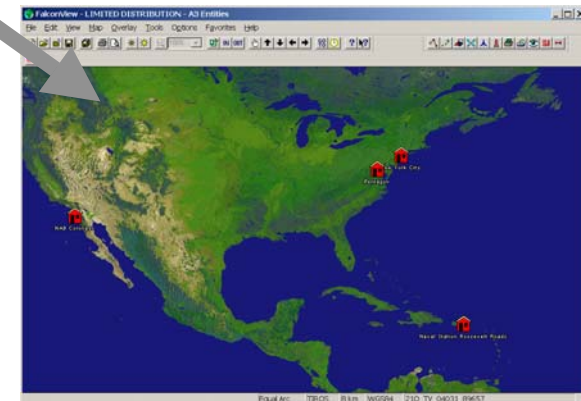
## Digital Library



## Link Analysis



## Web Content



## FalconView



# Pointer UAV

- ✓ The Pointer is a Back-Packable, Hand-Launched Unmanned Aerial Vehicle (UAV).
- ✓ Missions: day/night reconnaissance, target and damage assessment, and perimeter and asset security.
- ✓ The Pointer utilizes military grade Py-Code GPS, AutoNavigation and Infrared (IR) thermal imaging camera for 24 hour operation.
- ✓ Moving maps, target image GPS location, and chemical/biological sensor payloads are also available on the Pointer.

<http://www.aerovironment.com/area-aircraft/prod-serv/pointer.html>





# METOC Impacts on NSW Platforms



	17 JUN		18 JUN		19 JUN		20 JUN	
	00Z-12Z	12Z-00Z	00Z-12Z	12Z-00Z	00Z-12Z	12Z-00Z	00Z-12Z	12Z-00Z
PERSONNEL	T	T	T	T	T	T	T	T
HELO		V	V	V	V	V	V	V
MK-V				W		W		W
RIB				W		W		W
SDV				S	S	S	S	S
	W: VRB 5 BCMG NW 10-15 BY 12Z V: 4-6 HZ DCRG 1-3 BLDU T: 99/83 SST: 80-83 S: 1-2, 2-4 SEC SS: 2		W: NW 13-18 BCMG NW 15-20G25 BY 12Z V: 3-5 HZ, OCNL 1-3 BLDU T: 99/85 SST: 80-83 S: 1-2, INCRG 2-4, 2-4 SEC BY 18Z SS: 2-3		W: NW 13-18 BCMG NW 15-20G25 BY 12Z V: 3-5 HZ, OCNL 1-3 BLDU T: 97/83 SST: 80-83 S: 2-4, 3-5 SEC SS: 2-3		W: NW 13-18 BCMG NW 15-20G25 BY 12Z V: 3-5 HZ, OCNL 1-3 BLDU T: 98/81 SST: 80-83 S: 2-4, 3-5 SEC SS: 2-3	

W = Surface Winds (KTS)  
 V = Visibility (NM)  
 T = Temperature (F)  
 RW= Rainshowers  
 TS = Thunderstorm  
 TB = Turbulence  
 F = Fog  
 HZ = Haze  
 DU = Dust  
 C = Ceilings  
 S = Sea Heights  
 SS = Sea State  
 HI = Heat Index

■ = No Impact

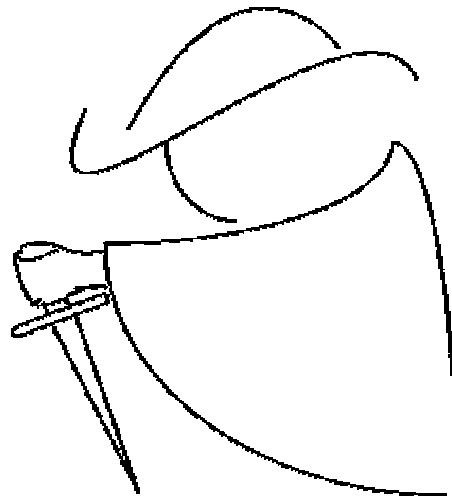
■ = Marginal Impact

■ = Significant Impact

UNCLASSIFIED

# MSC Intelligence Support

- Target Intelligence Packages
- Tailored Imagery
- Cryptology Indications and Warning
- Research / Intel Community Liaison
- Mission Feasibility Analysis



# Software Development as a Combat Support Function

- Terrorism Information Content is inherently varied and dynamic
- Software Development must also be agile and adaptable  
80% of working software now is better than 100% never...

## Distributed open enterprise software development

- Central software cell:
  - Development Coordination & Configuration Mgmt
  - Developer support desk (both uniform & civ)
  - **Nametag Management is critical!**  
Identify, track, support, and leverage uniform-wearing software development talent that already exists throughout SOCOM!!
- Deployed developers
  - Like NIMA Tech Rep Program
  - Automate working with endlessly changing data formats
  - Rapidly prototype functionality as requirements emerge
  - Feed requirements-as-working-code back to central development cell
  - Can provide prototyping *and* training



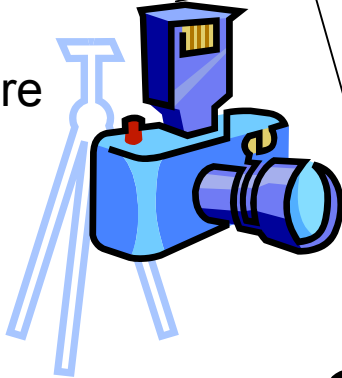
*"We need guns, lots of guns!"*

# ISORight

1. Enter ISOPrep Data



2. Take Picture



3. Scan Fingerprints  
(Crossmatch Verifier 300  
Fingerprint Scanner <\$300)



4. Generate MS Word  
ISOPREP

A screenshot of a Microsoft Word document titled "CONFIDENTIAL - Microsoft Word". It displays a form with various fields for personal and identification data, including name, date of birth, and address. The form is labeled "CONFIDENTIAL (WHEN FILLED BY)" and "CONFIDENTIAL (WHEN FILLED BY)".

5. Update ISOPrep  
On-Line later



- Accurate, Complete, Digital ISOPREP in 5 min
- 100% of NSW ISOPREPS for OIF created with ISORight



# What's in store for the Future?

- Biometrics for MIO/LIO (collection tech + database)
- Remote sensing
- More UAVs
- NSW/IC/OGA two way cooperation
- Expanding network of software developers leveraging Microsoft .NET framework
- **Get Tactical/IC data to analysts and operators**

